

HUALAPAI NATIVE FISH REARING FACILITY
Hualapai Reservation, Peach Springs, Arizona

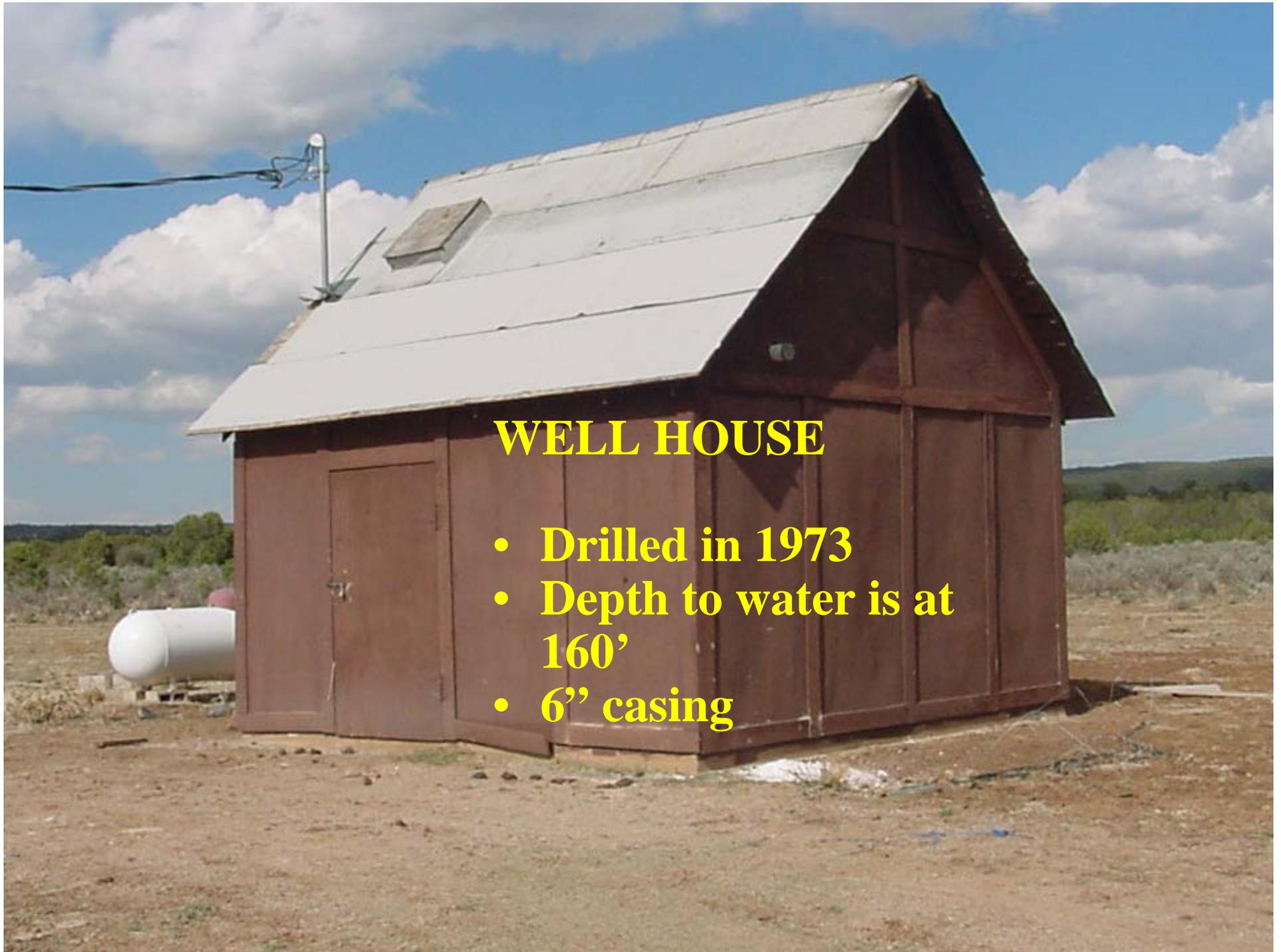


PURPOSE

- **Address the immediate need for a rearing facility for Razorback suckers (*Xyrauchen texanus*), Humpback chub (*Gila cypha*), and other endangered and/or native species.**
- **Design and implement plans to recover native species in Grand Canyon.**

BACKGROUND

- **March of 1995. BOR funded a Feasibility Study for the Construction and Operation of an Endangered Fish Rearing Facility on the Hualapai Reservation.**
- **November of 1995. BOR funded the Environmental Assessment of this project.**
- **Frazier Wells was chosen as the Preferred Site.**

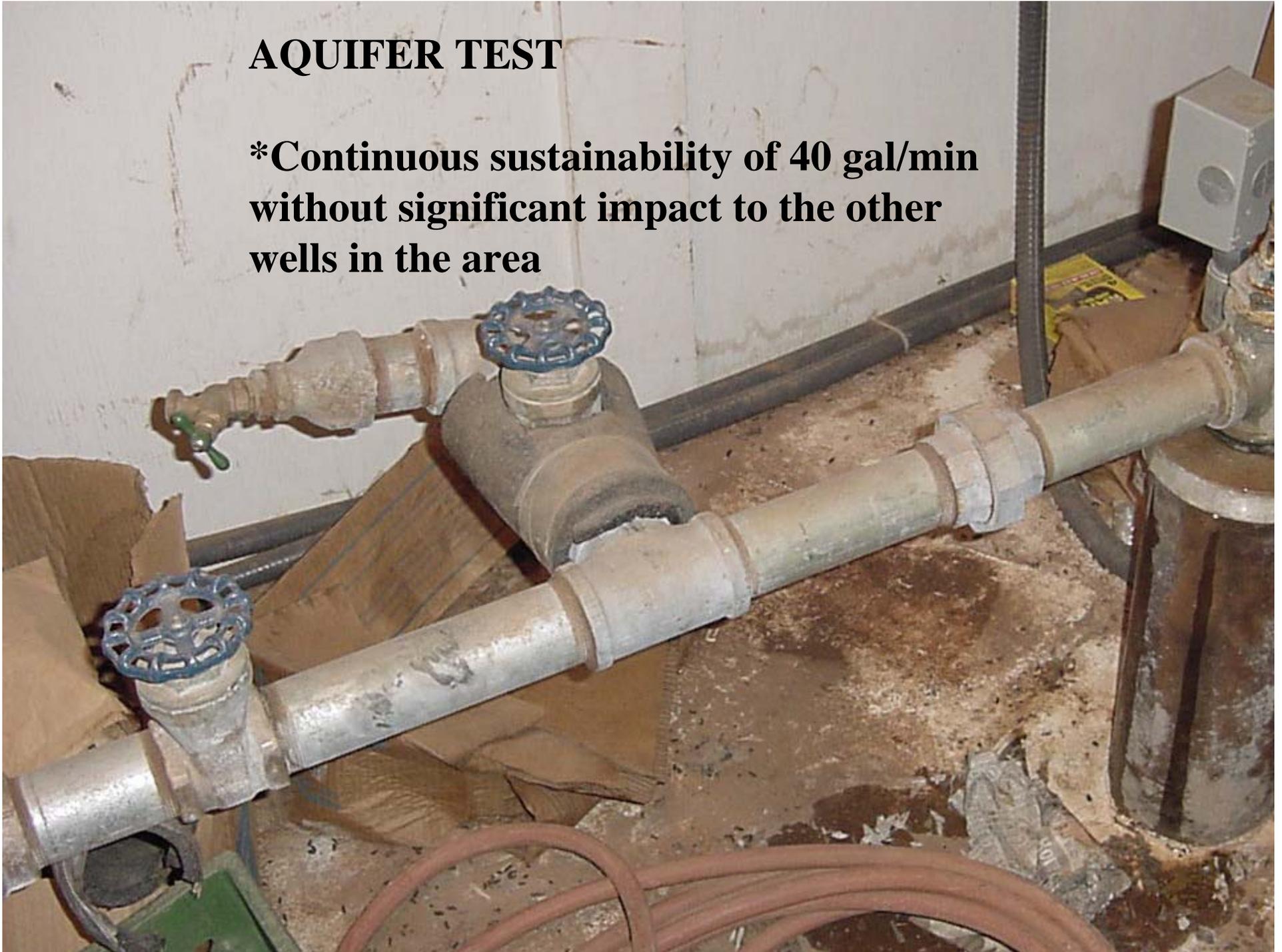


WELL HOUSE

- Drilled in 1973
- Depth to water is at 160'
- 6" casing

AQUIFER TEST

***Continuous sustainability of 40 gal/min
without significant impact to the other
wells in the area**



WATER QUALITY

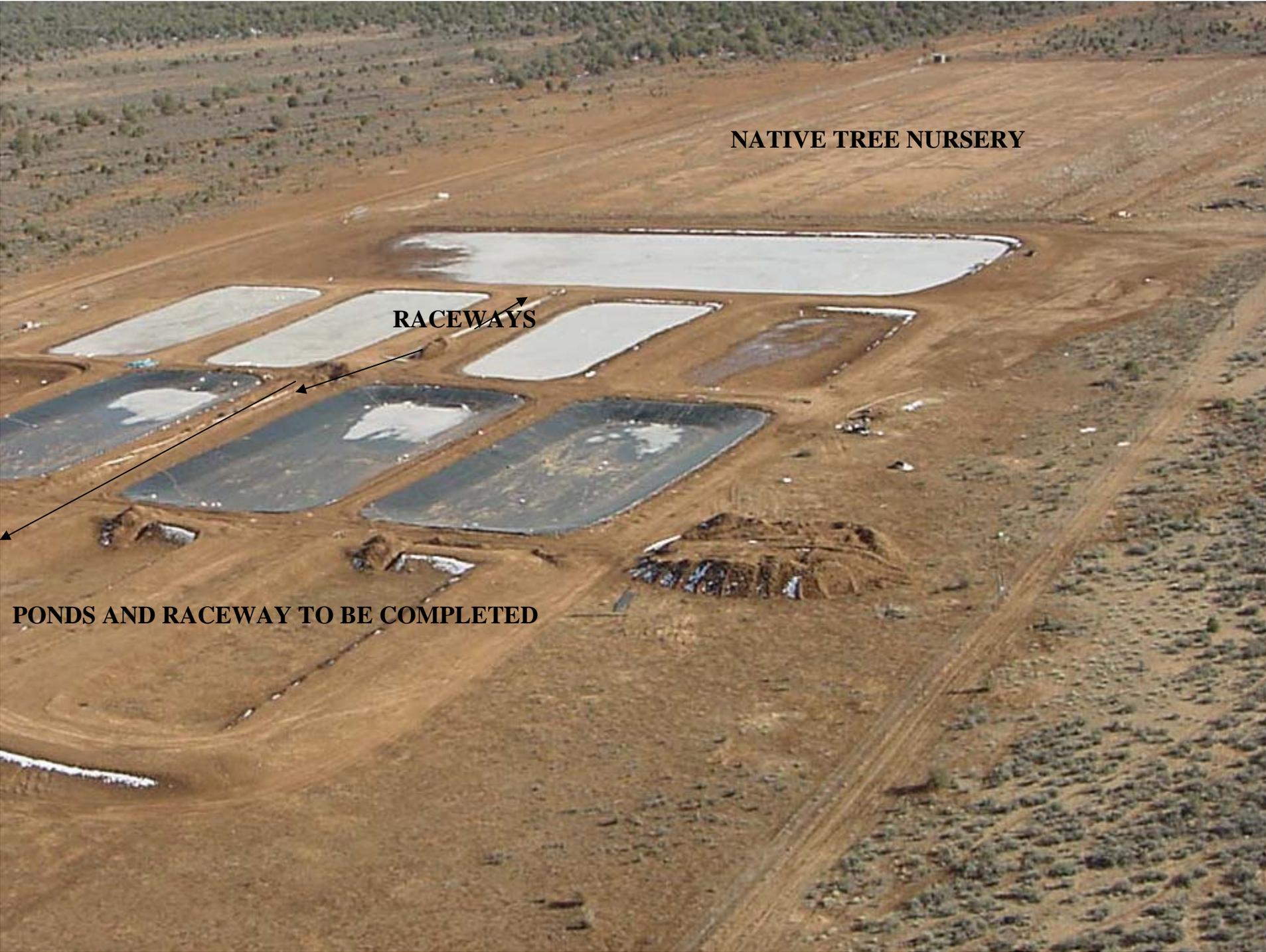
* EPA Source Water Approved

				Cations (mg/l)				Anions						
				pH	EC (mmhs)	TDS mg/l	% NA	NA	K	Ca	Mg	CO ₃		HCO ₃
1.														24.7
2.														25.4
3.														25.3
4.	7.4	401	237	9.9	10	0	76	7	0	219	13	19		
5.	7.5	405	247	9.6	10	1	75	6	0	213	8	19		
6.	7.6	413	258	10. 3	10	1	68	6	0	217	10	19		

NATIVE TREE NURSERY

RACEWAYS

PONDS AND RACEWAY TO BE COMPLETED



SUMP PUMP

- **Re-circulates the water from the de-nitrification pond to the rest of the ponds without the use of the well**
- **Powered by electricity**



***21KW**

***For use during times of no electricity**





FISH DATA

June 2003

- **Average length for for 100 Razorbacks sampled was 28.5cm**
- **Lengths ranged from 19.5cm – 33.8cm**
- **5 of 468 Razorbacks taken in one seine haul showed deformities**
- **No parasites observed**
- **107 fish > 30cm were pit tagged and released into Lake Havasu**



- **Non-intensive care for the fish**
- **Stimulated algae and zooplankton growth with alfalfa pellets**
- **We have received 4 bags of razorback feed**

FUTURE PLANS

- We received \$249,376 from the USFWS
- We received \$10,000 from the BIA
 - * Completion of the remaining 4-1/2 acre ponds
 - * Install air and water lines and drain lines
 - * Connect last 8-1/2 acre ponds to re-circulating system
 - * Construct a more efficient irrigation system utilizing the effluent water of the facility
 - * Construct sewage and install water and electricity to housing facility

AMOUNT OF MONEY INVESTED TO DATE

- BOR \$260,000
- BIA FISH HATCHERY MAINTENANCE
- \$96,000
- HUALAPAI WILDLIFE, FISHERIES,
AND PARKS
- \$225,000

